Listing of Claims

1-4.   (Canceled)

5.   (Currently Amended) An image search method, comprising:

determining color similarity between a reference image and a target image each of which is represented by hierarchical grid levels, said determining step including cross-matching ~~different~~ grid levels of the reference image and target image, such that a grid on one level of the reference image is matched to a grid of a different level in the target image; and

searching images based on a content-based query by a user.

6.   (Previously Presented) The method of claim 8, wherein said determining step includes determining similarity of reliability information indicative of accuracies of the region representative color values between the grid levels of the reference and target images.

7.   (Previoiusly Presented) The method of claim 5, wherein said determining step further includes: matching the grid levels of the reference image with respective ones of the grid levels of the target image.

8.   (Previously Presented) The method of claim 5, wherein said determining step includes: matching region representative color values between the grids levels of the reference and target images.

9.   (Previously Presented) An image search method comprising:

determining color similarity between a reference image and a target image each of which is represented by hierarchical grid levels; and

searching images based on a content-based query by a user, wherein the determining step comprises:

determining a similarity between cells in the hierarchical grid levels of the reference and target images in accordance with steps that include:

multiplying color similarity (Color_Sim) corresponding to a similarity of region representative colors between cells in the grid levels of the reference and target images and a first weight,

adding a value obtained by multiplying similarity (I) representing a similarity of a reliability between cells in the grid levels of the reference and target images and a second weight to the color similarity (Color_Sim), and

normalizing the cell similarity.

10.   (Previously Presented) An image search method comprising:

determining color similarity between a reference image and a target image each of which is represented by hierarchical grid levels; and

searching images based on a content-based query by a user, wherein the determining step includes determining a similarity between same grid levels in the reference and target images based on a total value summed by shifting in a horizontal and vertical direction

based on a shifting amount by a difference of widths and heights between grid levels when two grid levels are compared and the similarity is calculated.

11. (Previously Presented) An image search method comprising:

determining color similarity between a reference image and a target image each of which is represented by hierarchical grid levels; and

searching images based on a content-based query by a user, wherein the determining step includes determining a color similarity between the grids of the reference and target images based on a value summed shifting in a horizontal direction and a vertical direction by a difference in width and heights between the grid levels.

12. (Previously Presented) The method of claim 5, wherein a cell similarity between grid levels of the reference and target images is used for searching a same position and different position between same levels in the case that the search is performed by matching a color region.

13. (Currently Amended) An image search method comprising:

determining color similarity between a reference image and a target image each of which is represented by hierarchical grid levels, said determining step including cross-matching grid levels of the reference image with grid levels of the target image , such that a grid

on one level of the reference image is matched to a grid of a different level in the target image; and

searching images based on a content-based query by a user, wherein a color region matching operation between the grid levels of the reference and target images is directed to searching at a same position of different levels and at a different position when searching the color similarity between different levels.

14.   (Currently Amended) A method of forming an ~~An~~ image data structure, comprising:

forming a first grid; and

forming a second grid, wherein the first grid and the second grid express a feature of an image at different resolutions, wherein each of the cells in the first grid is assigned a first value and a second value for representing the spatial color feature of said image, and wherein the first value is a regional representative color and the second value is a reliability score indicative of an accuracy of the regional representative color.

15.   (Currently Amended) The method ~~image data structure~~ of claim 14, wherein the first grid includes a first number of cells and the second grid has a second number of cells different from said first number of cells.

16. (Currently Amended) The method ~~image data structure~~ of claim 15, wherein said second number of cells is greater than said first number of cells.

17. (Currently Amended) The method ~~image data structure~~ of claim 14, wherein the first grid and the second grid are hierarchically related.

18. (Currently Amended) The method ~~image data structure~~ of claim 17, wherein the second grid includes a plurality of groups of cells, each group representing the feature of said image at different areas within a respective one of the cells in the first grid.

19. (Currently Amended) The method ~~image data structure~~ of claim 15, wherein the feature is a spatial color feature.

20-21. (Canceled).

22. (Currently Amended) The method ~~image data structure~~ of claim 14, wherein each of the cells in the second grid is assigned multiple values for representing the spatial color feature of said image.

23.   (Currently Amended) The <u>method</u> ~~image data structure~~ of claim 15, wherein the number of cells in the first grid and the number of cells in the second grid are proportional to a size of the image.

24.   (Currently Amended) The <u>method</u> ~~image data structure~~ of claim 23, wherein the image has a square shape and is uniformly divided into the cells of the first grid.

25.   (Currently Amended) The <u>method</u> ~~image data structure~~ of claim 23, wherein the image has a non-square shape, and wherein a first side of the image is divided uniformly and a second side of the image is divided based on a dividing unit of the first side, said divisions forming the cells in the first grid.

26.   (Currently Amended) The <u>method</u> ~~image data structure~~ of claim 15, wherein each of the cells in the first grid have a first size and each of the cells in the second grid have a second size different from said first size.

27.   (Previously Presented) The method of claim 5, wherein the determining step is performed using a multilevel image data structure which is expressed based on an image grid having at least two different hierarchical levels.

28.   (New) The method of claim 14, further comprising:

setting the reliability score of each cell based on a value which is determined in accordance with mixed rate information and color similarity information.